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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/067,344	02/07/2002	Tomoyuki Matsuyama	105218.01	7336

7590 07/14/2003

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EXAMINER

FULLER, RODNEY EVAN

ART UNIT	PAPER NUMBER
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2851

DATE MAILED: 07/14/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/067,344

Applicant(s)

MATSUYAMA ET AL.

Examiner

Rodney E Fuller

Art Unit

2851

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on April 25, 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-63 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-63 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 May 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 09/487,996.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Remarks

The applicant's Amendment, dated April 25, 2003, has addressed all of the 355 USC 112 rejections set forth in the Office Action mailed November 7, 2002.

Regarding the 35 U.S.C. 102(b) rejection of claims 1-63 as being anticipated by Ohta, et al. (US 5,105,075), the applicant makes the argument that Ohta "does not disclose or suggest the step of setting or inserting a correction member that corrects residual aberration in a projection system between the reticle and substrate setting positions;" that Ohta "does not disclose or suggest processing a correction member based on measured residual aberration," and that Ohta "does not disclose or suggest moving a reticle or substrate in order to correct degradation of optical characteristics of a projection system caused by setting or inserting a correction member between the reticle and substrate setting positions." The examiner acknowledges, as applicant notes, that Ohta corrects distortion "by moving one of a plurality of lenses within the projection system in an optical axis direction and by moving the reticle in an optical axis direction." The examiner maintains that the current claim language is broad enough to read on the structure in Ohta. The adjusting means and/or moving lens of Ohta may correspond to applicant's "correction member." Thus, the examiner has considered the applicant's arguments in light of the amended claims and maintains the rejection.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-63 rejected under 35 U.S.C. 102(b) as being anticipated by Ohta, et al. (US 5,105,075).

Ohta (US 5,105,075) discloses all the structure set forth in the claims. Regarding claims 1, 25 and 50-52, 56, 58, 60 and 62, Ohta (US 5,105,075) discloses "...a providing step for providing a projection system (Fig. 3, ref.# 6, 7) projecting and exposing an image of a predetermined pattern formed on a reticle (Fig. 3, ref.# 1) to a photosensitive substrate (Fig. 3, ref.# 9); a setting step for setting a correcting member (column 1, lines 40-66) correcting residual aberration in said projection system at a predetermined position between reticle setting position where said reticle is set and a substrate setting position where said photosensitive substrate is set; and a correcting step (column 1, lines 40-66) for correcting degradation of optical characteristic of said projection system caused by setting said correction member at said predetermined position; where said correcting step includes a first adjusting step for adjusting at least one of said reticle setting position and said substrate setting position (column 1, lines 61-66)."

Regarding claims 2 and 26, Ohta (US 5,105,075) discloses "...wherein said correcting step further includes a second adjusting step for adjusting said projection system for correcting degradation of said optical characteristics unable to be corrected by said first adjusting step." (column 1, lines 40 – column 2, line 12).

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Regarding claims 3, 12, 13, 17, 27, 28, 36-39 and 46, Ohta (US 5,105,075) discloses “...wherein said correcting step further includes a first calculating step, prior to said setting step, for calculating an adjusting amount of at least one of said reticle setting position and said substrate setting position in order to correct degradation of said optical characteristic produced in accordance with the thickness of said correction member, and said first adjusting step includes a step for adjusting at least one of said reticle setting position and said substrate setting position based on first calculated information obtained in said first calculating step.” (Column 9, line 50 – column 10, line 11).

Regarding dependent claims 7-11, 16, 18, 20, 22, 31-35, 40, 41, 43, 45, 49 and 53-55, each claim includes an associated step of “...preparing an exposure apparatus manufactured by using the method for manufacturing an exposure apparatus” as set forth in associated parent claims (i.e., claims 1-6, 12, 17, 19, 25-30, 39, 42, 44, 46 and 50-52) along with steps of “...setting a reticle at said reticle setting position,” “...setting a photosensitive substrate at said substrate setting position,” “...exposing a pattern image of said reticle to said photosensitive substrate by using a projection system of an exposure apparatus prepared in said preparing step,” and “...developing said photosensitive substrate exposed by said exposing step.” The step of reticle setting, substrate setting, exposing, and developing are inherent steps utilized in the operation of the apparatus set forth in Ohta (US 5,105,075) as well as most typical photolithography systems.

Regarding claims 25, 42, 44, 47, 48 and 50 Ohta (US 5,105,075) discloses “...a measuring step for measuring residual aberration in said projection system (column 2, lines 54-68).

Regarding claims 57, 59, 61 and 63, the claimed exposure apparatus and projection system product would be inherent result of performing the methods set forth in claims 56, 60, 58 and 62.

Conclusion

3. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rodney Fuller whose telephone number is (703) 306-5641. The examiner can normally be reached on Monday through Friday from 8:00 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Russ Adams, can be reached on (703) 308-2847.

Rodney Fuller
Primary Examiner
July 7, 2003

